

**REMARKS**

The above claims 17 and 18 are submitted to be patentable over the art of record for the several reasons explained below.

In response to the Office Action of March 02, 2004, the Applicant Pro Se requests the above amendments to the claims to be entered, in order to overcome the last rejections and meet all requirements for allowance. The Applicant strives to define the present invention by claims-wording which relies only on information supported by the original June, 2001 Application, that is, without inadvertently introducing new matter, AND, to recite in the claims the several novel physical distinctions and non-obvious physical structure of the present invention, AND, to recite the advantages in the 'whereby' clauses.

The reason the merits are being defended, explained, and claimed again, AFTER FINAL, is that the Applicant Pro Se, without attorney or agent, was (and still is) inexperienced with drafting allowable claims that succeed in being allowed, and inexperienced with presenting valid arguments for non-obviousness. (That is, inexperienced with drafting claims which distinguish distinctly over prior art relied upon, claims which meet all requirements for allowability.) Applicant's prior remarks and persuasive reasonings were thus far insufficient only due to not knowing how to apply limitations which verbally express the non-obviousness of the present structure's optical system; this inexperience constitutes good and sufficient reason why the present claims and explanation of merits weren't earlier presented in the present manner.

Some of the present reasons to overcome obviousness rejections were not presented until now because they were not learned of until recently borrowing "The Complete Patent Book" by Rogers, copyright 2003, Sphinx Publishing, from

the local public library, giving the Applicant specific case decisions which might be applied. The resource book was not sought out during the Applicant's November '03 Amendment D because the rejection of obviousness after Jackson was thought to be soundly overcome in that response using the several reasons given in Amendment D. Again, inexperience with defending non-obviousness was the good and sufficient reason why the present arguments and citation of case-decisions were not given before now.

While prior rejected claims (drafted by the Applicant) have been found to have inadequate wording, the present invention is believed to have merit, and the present Amendment E is another earnest effort to overcome all rejections and inadequacies without introducing unsupported new matter. Limitations which were Omitted earlier have now been added to the examined (cancelled) claim 10 in response to guidance during the Telcons with USPTO Examiners of Art Unit 2872, notice that the rewording in the claims-text is shown with underlining and strike-outs to highlight the evolution of these Two Independent Claims (Claim 17 describes the right-looking back-up system; Claim 18 describes left-looking back-up system) compared with cancelled Claim 10.

**Wording in Claim 17 and 18 with Support for such wording:**

Wording in Claim 17, an independent claim, represents (cancelled) Claim 10, where the cited improper 'new matter' of the last attempt (Amendment D) has been removed.

Further, the vehicle is now explained with wording to establish that it has "a driver's-side and a passenger-side"; wording is also now added to rely upon the vehicle's side doors, "sides include door(s)" to better supply wording which explains the novel, non-obvious features and physical locations of elements. Support for these elements and limitations were shown in FIG.1.'s depiction of a typical passenger vehicle 21, namely, a 4-door Toyota Camry

being sold in the USA, and based on the assumption that typical passenger vehicles are generally thought of as having a driver's-side, a passenger-side, and side-doors. Furthermore, FIG 1 depicts side-doors on all three vehicles 21, 4, and 23.

The physical distinctions of the mounting-position-and-aiming-of-the-back-up-mirror are now enhanced by adding the words 'substantially' or 'generally' in appropriate places.

The phrases **"reflecting surface lying in a substantially vertical plane"** and **"generally parallel with said vehicle's sides"** are supported by FIGs 1 and 3, in which two orthogonal views of back-up mirror 6 depict such an alignment. The two phrases together are submitted to be synonymous with the original phrasing, "reflective surface facing towards one side of the vehicle (left-looking or right-looking)" found in [0014], since a 'side-of-the-vehicle' itself, overall, lies in a generally vertical plane which is parallel with the centerline of the vehicle. The photograph developed at Park Ridge Walgreen's on July 23, 2000 of a working embodiment also supports the expressions, showing a Buick Regal 4-door sedan having its back-up mirror surface lying in 'a substantially vertical plane, generally parallel with vehicle's sides'. A copy of this photograph was mailed to USPTO as part of the Applicant's Sept. 25,'02 Response. (The same phrasing is also now amended into the Specification in [0033], to achieve agreement with phrasing in claims: ..."a standard rear-view mirror 10 whose reflecting surface lies in a nearly vertical plane, which plane is also nearly parallel with the vehicle's rear-bumper" and ..."back-up mirror6's reflecting surface lies in a plane which is nearly vertical, the plane is also very nearly parallel with the vehicle's sides, as shown in the encircled detail of FIG 1.")

The crucial positional phrasing **"enough forward of said rear end so that a ray emanating from a rear bumper of an adjacent obstruction(4) towards said**

**back-up mirror position is blocked by said vehicle itself** conveys the limitation that not only is the position well forward of the rear end, but the limitation makes the present invention specifically INOPERABLE to carry out the purpose served by the device of Jackson, which is AOK-fine, because the present invention was never meant to serve the purpose served by the device of Jackson. **Support for this "...enough forward.." limitation in the claims** is found in Applicant's FIG. 1, which was drawn from dimensions taken from a '95 Toyota Camry 4-door sedan, a car model of very high annual sales among all passenger sedans in the USA, whose trunk size is in the range of 30-something inches front-to-back wise. FIG 1 clearly shows the back-up mirror(6) to be closer to the forward end of the trunk than to the rear end of the trunk, see FIG.1's depiction of the trunk-lid, which proves the present mirror position is well forward from the vehicle's rear-end, yet the mirror position is still inside the passenger compartment (see rear windshield of vehicle 21, which forms part of the rear-side of the passenger compartment). Further Support for the **"...ray emanating from a rear bumper of an adjacent obstruction(4) towards said back-up mirror position is blocked by said vehicle itself"** limitation is shown by FIG 1's adjacent obstruction, (parked) mini-van(4), which is specified in the DESCRIPTION of FIG.1 at paragraph [0033], whose rear bumper is not literally drawn-in, but can safely be presumed to exist along the rear end of vehicle(4), as typical rear bumpers on passenger vehicles always do, and further it is safe to presume that its rear-bumper is only knee-high above the pavement, as is typical for front and rear bumpers on passenger vehicles. Therefore, in FIG.1, a ray drawn toward the back-up mirror(6) mounting position, starting from anywhere on that rear bumper of vehicle(4), would represent a path in three dimensions which also travels upwards to reach the height of the back-up mirror mounting position, and, that path absolutely passes through some part of the opaque materials of vehicle(21), so, FIG. 1 is

showing a mirror system whose back-up mirror mounting position is such that no degree of tilting the reflecting surface would be capable of giving the driver a view of that which Jackson's device taught to be viewed (the neighbor's rear bumper). This crucial distinction which expresses the front-to-back position as being located WELL forward of the rear-end, inside the passenger compartment, is now recited in this language in the present claims, to limit the present structure.

This '**..enough forward..**' mounting position wording has now made the present invention ABSOLUTELY non-obvious after Jackson, whose device led a person of ordinary skill away from the present mounting position by stating to be "fixed at the rear end" , and whose FIGS further taught a mirror mounted on/near the centerline of the vehicle, (well away from either the driver's-side or passenger-side walls) (*in re GURLEY, 27F.3d 551 (Fed Cir 1994)*).

**Support for the phrase "aft of said driver's seat row"** is provided by FIG 1 showing the back-up mirror located well behind the head of the driver of vehicle(21). The photograph developed at Walgreen's on July 23, 2000 of a working embodiment shows a Buick Regal 4-door having its back-up mirror mounted well aft of the driver seat row, too (copy of this photograph was mailed to USPTO in the Sept. 25,'02 Response), which photo also Supports the '**..enough forward. .**' limitation. Further Support for "aft of. ." comes from the (cancelled) Claim 1 which recited ". . in a region generally behind said driver's seat.."

Phrasing for another limitation has also been added into Claim 17 (and into 18, but on compartment's passenger-side) to further locate the back-up mirror(6) position as **"generally against a non-door surface of said passenger compartment's driver's-side"**. Support for this limitation is found in FIG 1 which depicts the back-up mirror(6) fastened against the side pillar on vehicle 21's left side, (which pillar is also along the passenger

compartment's driver's-side side), which pillar supports the rear-left corner of the vehicle's roof, and it constitutes a "non-door surface" forming part of the compartment's left wall. Further Support for this limitation is found in paragraph [0043] of DETAILED DESCRIPTION which described "another embodiment" (for an SUV, which embodiment was invented while mounting the present system onto a Chevy Suburban belonging to a relative who lives in Minnesota) and teaches the mounting position to be against "a non-movable side-window's inside surface" ( that is, not against a side-door, not against a door's window, either of which would make it a "moveable window" since any door's window moves relative to the vehicle whenever the door opens, and it might also be a roll-down moveable-window). Further Support for this "**non-door surface**" limitation is found inside FIG 1's DETAIL-circle, in which we see a tiny line depicting the rear-most edge of the closed door of the Camry touching both the car body and the forward-most edge of that side-pillar against which the back-up mirror is mounted, the tiny line ends at the roof, proving that the position being depicted in FIG 1 is **against a non-door surface** along the driver's-side side of the passenger compartment. Further Support for this limitation is also seen in the fully-operational left-looking reduced-to-practice working model, photographed in 35mm film developed at Walgreen's on July 23, 2000. (A copy of the photo showing the operational back-up mirror system in a Buick sedan, and the Walgreen's date-stamped film-developing envelope, and the Walgreen's date-stamped photo-backing was submitted to the USPTO in Applicant's Sept. 2002 Response.) NOTE: The fact that the side pillar or **non-door surface** forming a side wall of the passenger compartment is itself not always in a true, plumb, vertical plane is understood, appreciated: It need not be truly vertical (just the reflective surface of back-up mirror 6 has to lie in the generally vertical plane), as Supported in the original specification: the non-door surface(12) is

literally 'nearly vertical' in the Table of Reference Numerals in Drawings, in spite of having been depicted in FIG.3 as quite vertical indeed, but since the vehicle 21 in FIG.1. has a roof footprint smaller than the car-body, the side pillar in FIG.1 cannot be literally vertical, but it is customary in passenger cars to be nearer to vertical than to horizontal. If FIG3 is inadequate, having depicted the section of the side-pillar of FIG.1 as plumb-vertical, the Applicant can submit an amended FIG3 showing the non-door surface 12 as slightly off-vertical, if so requested as being needed, in order to have a more correct section-view of FIG1 depicted by FIG3.

Support for the added phrase describing oncoming cross-traffic, **"approaching from said passenger side"**, is found in the second sentence of [0033], " . . .allowing an alternative view of nearby oncoming cross-traffic approaching from the right side of a backing-up vehicle." Meanwhile, the embodiment and claimed invention having a left-looking back-up mirror (active claim 18), is for viewing oncoming cross-traffic objects **"approaching from said driver's side"**, as supported in [0041].

Support for the whereby-clause presently added to the active claims, **"whereby the back-up mirror element does not obstruct existing rear-views through said window at the rear of said passenger compartment"**, is found in the BRIEF SUMMARY's paragraph [0022] "to not obstruct any of the views already available to a driver...." and again in the DETAILED DESCRIPTION's paragraph 0044,(but previously amended) ". . another embodiment...partially obstructs an existing view".

The next new phrase has been added in two places, **"consisting of a single optical element,"** under the guidance received from USPTO's Drew Dunn, in order to emphasize, convey, define, and limit that the present back-up mirror 6 is Not itself a system-of-optics, (such as is taught by some of the seven-just-cited references (which prior art only became known to the Applicant in the

March, 2004 Office Action)). For example, in Baumgardner's FIGs. 12,13 (3,809,462, 1974), the optics relied upon are contrary to the present system, in that they are multiple optics elements. The present system teaches only 2 mirrors overall, namely, one rear-view mirror and one back-up mirror to form the present optics. This added limitation is Supported by the present FIG 1. and the original specification, and is contrary to, and distinguishes over Baumgardner. The present invention further distinguishes over Baumgardner by teaching: 1.the back-up mirror lies in a plane substantially vertical, 2.the same mirror lies in a plane substantially parallel with the side of the vehicle, 3. the back-up optics do not obstruct existing rear-views out the window at the back of the passenger compartment, 4.the present overall system contains no lens element.

The reference Ben-Ghaith (5,666,227, 1997), teaches a mirror-pair, and, teaches it be mounted on the centerline of the vehicle, and, be mounted at the vehicle's rear-end, and, external to the passenger compartment. The present invention again is contrary in many ways, by teaching that the back-up reflection element be: 1.against one side of the vehicle's passenger compartment (FAR from the centerline), 2.inside the passenger compartment, 3.significantly and well forward of the rear-end, 4.the reflecting surface lie in a plane generally parallel with the vehicle's sides, 5.not obstruct existing rear-views, and 6. consist of a single optical element.

**Support for SPECIFICATION Amendments:**

Any words added to the Specification by this Amendment are absolutely NOT intended to add new material, but are words supported by information originally conveyed by Figures 1-3. Each phrase is supported and defended below. Further evidence supporting the added phrases is found in the dated photo developed at the Park Ridge Walgreen's July 23, 2000 (entered into the prosecution of this Application in Applicant's September, 2002 materials),



depicting a reduction-to-practice (working model) of the back-up mirror system in the Buick Regal Sedan (left-looking). Words are also added by this Amendment (to follow the guidance of the USPTO's Drew Dunn for the Applicant) to make the Spec and Claims wordings agree (re: Draft-claims faxed on May 12).

Word deletions from the Specification by this Amendment are intended to bring the Specification into agreement with the limitations which have been added during the lengthy prosecution of this Application.

**REJECTION under 112 is now overcome**

because the phrases in the (more limited) active claims 17 and 18 no longer recite dimensions. The Applicant apologizes for making this error, and regrets having incorrectly narrowed the (cancelled) claims 10-16 in a manner which accidentally, unintentionally, introduced 'new matter'. The Applicant pro se is still genuinely trying to draft allowable claims which meet all requirements for allowance; the inexperience of the Applicant (without attorney or agent) is the good and sufficient reason why this type of rejection happened, and due to this reason, it is requested that the present merits be reconsidered.

**REJECTION under 103(a), obviousness after Jackson, is now overcome**

because the herein amended (narrowed, more limited) claims now clearly distinguish those physical features and novel structure which were neither obvious, nor relied upon, nor taught by the device of Jackson, the features are namely:

a. the present back-up mirror mounting position, forward-to-back, is now more narrowly expressed in the claims as "enough forward of said rear end so that a ray emanating from a rear bumper of an adjacent obstruction(4) towards said back-up mirror position is blocked by said vehicle(21) itself", as has always been clearly shown in FIG.1.,

b. the present back-up mirror mounting position is now expressed in the claims as further fastened at a left-to-right position located "...generally against a non-door surface of said passenger compartment's driver's-side", which is contrary to Jackson who shows mounting on the centerline. In addition, other prior art mirror-systems for drivers which rely on lenses and mirrors, Brinkley and Ben-Ghaith, teach away from the present side-of-vehicle mounting position, teaching optics along the car's centerline.

c. the present back-up mirror's "reflecting surface lying in a substantially vertical plane", is contrary to that of Jackson whose reflective surface MUST lie in a downward-tilted plane since, due to the Law of Reflection,  $\theta_i = \theta_r$ , it cannot be upright; Jackson's Fig. 1 is proof that the ray coming upwards from the direction of the pavement (or neighbor's bumper) gets reflected to travel horizontally towards the rear-view mirror, requiring a downward-tilted mirror whose reflecting surface does not lie in a substantially or generally vertical plane,

d. the present back-up mirror element reflecting surface ALSO lies in a plane "generally parallel with said vehicle's sides", while that of Jackson MUST lie in a plane diagonally crossing (nowhere near "parallel with") the sides of the vehicle, which is optically necessary to split the 90-degree turn in half, as clearly seen in Jackson's own FIG.3 + FIG.4, (bird's-eye views), obeying the Law of Reflection,  $\theta_i = \theta_r$ . The present invention distinguishes over Jackson by relying upon alignment generally parallel with the vehicle's sides.

e. the present back-up mirror element position does not block any part of the normal rear-viewing field thru the rear window, while that device of Jackson would not function or operate unless it did block part of the rear-views, due to opaque body parts. The present claims now specify another advantage that distinguishes over Jackson, namely, the back-up mirror element

"does not obstruct existing rear-views through said window at the rear of said passenger compartment".

NOTE: The Applicant respectfully reiterates that a side-wall mounting position, well forward of the rear end, would render the device of Jackson INOPERABLE due to metal being opaque, the metal car body material is always interposed between the neighbor's bumper and the side-wall position, in re *Gordon* 733 F2d 900 Fed Cir 1984.

The Applicant therefore submits that the present invention is NON-OBVIOUS after Jackson, and cites **these further arguments for non-obviousness**:

1-a) the prior art in this field (mirror systems for backing-up drivers of passenger vehicles) have not been shown to enjoy commercial success, in spite of suggestions to construe that they could address the present need or that they teach the present structure; if physical modifications to prior art were obvious in order to match the present physical structure of elements, they have not been shown to exist commercially, therefore such obviousness has not been supported.

2-b) prior art lack any suggestion of physical modifications to meet or match the present invention's physical structure, unsuggested modifications are non-obvious modifications. The references have not taught the present limitations of the present physical structure. The present structure relies on a novel relationship among its elements.

3-c) those skilled in this field have not appreciated the advantage of the present invention's back-up mirror position, in that it does not block any existing rear-views, having avoided positioning any optical element in the line of sight through the rear-view mirror out the rear window.

4-d) the reference relied upon, Jackson, is inoperative for its stated use if the back-up element gets re-positioned as claimed herein, such physical modification would make it inoperative, making it an inoperative reference,

5-e)the reference relied upon, Jackson, with numerous physical adjustments made in hindsight, (and made with strained interpretation), may possibly have addressed the present need, nevertheless, no evidence of such an implementation of physical modifications has been shown to exist, and furthermore, it is an **ancient (Parking Device, 1937) reference**, many years old; and it did not offer the present steps forward, which steps are recited in the present claims' whereby clauses,

6-f) if indeed the present physical structure of elements were obvious in light of prior art, those skilled in the art would certainly have implemented it by now, and no evidence has yet been found of implementation, indicating that the present advantages and present structure were not & are not obvious.

7-g)the position of the present back-up mirror "against a side" is contrary to at least 6 prior art references which demonstrate an optical path connecting front mirror to back mirror that traces along the centerline of the length of the vehicle; in those cases, the present invention goes against what is taught by those references, and hence the present invention is non-obvious after those references.

8-h)the present invention solves a different problem than the problem recited in the reference relied upon, Jackson(Parking Device); therefore, the present problem which is clearly recited in the present claims as .."deciding the safety of driving said vehicle in reverse into said lane of cross-traffic, whereby a collision can be better avoided", was unobvious to Jackson, *in re Wright*, 6 USPQ 2d 1959(1988).

9-i)No convincing line of reasoning was offered to support the stated judgment that the present physical structure of FIG 1, (having 5 or more physical features distinguishing over Jackson) is obvious to those skilled in the art.

10-j) As stated in prior correspondence, Commercial Interest is pending with Ford Global Technologies, Inc, and General Motors' WWP-Advance Purchasing, Supported by Applicant's DECLARATION within Amendment A of May 30, 2002, which contained copies of correspondence received from each company.

For all these physical distinctions, the Applicant still believes the present invention, especially as it is now very narrowly claimed, (and as it was pictured in the film developed by Walgreen's on July 23, 2000), to be both non-obvious and patentable over Jackson, and all prior art relied upon to date.

In regard to the "**date of invention**" of the present invention, under MPEP 715 and 131, the Applicant **swears behind any references whose effective date falls on or after July 23, 2000**, since the Applicant has already DECLARED and submitted proof of building-and-testing the present invention on or before the day the photographs were developed at Walgreen's; A copy of a photo with datestamped evidence of the present **effective date** was long ago entered with the USPTO; the present effective date falls well before the date on the Pat. App. PUBLICATION by Martinson (20020186481, Dec.12, 2002).

--The Applicant submits that the physical structure of the present system of mirrors, including its back-up mirror mounting location is non-obvious, and is not anticipated, and is unexpected; see Applicant's FIG.1, location of back-up mirror6. The present mirror system relies on a back-up mirror's physical mounting position which is not taught, nor suggested, nor anticipated by the prior art of record (...except Baumgardner, one of whose optical-systems for drivers, relied further on a lens element AND an opera window); the present invention also relies on its back-up mirror's reflecting-surface to physically lie in a nearly vertical plane, which simultaneously lies in a plane nearly parallel with the sides of the vehicle. It also relies on a two-mirror system, namely, only 2 optical elements in the structure.

These physical distinctions are submitted to be of patentable merit under Section 102 and 103.

The Applicant submits, as previously, that the step forward represented by the present invention should be regarded as useful to society, and represents a significant step and advancement, since it is an improvement to reduce the frequency of bodily injuries and property damage caused by the tens of thousands of collisions between an oncoming, moving, cross-traffic objects and the backing-up vehicle, whose driver's view was otherwise blocked. --

**in response to REJECTION of claims 14,15, 16:**

Applicant has herein requested to cancel these claims, without substitution, as suggested by p.4 of the March 02, 2004 Office Action.

**in RESPONSE to #5. found on p.4 of March 02, 2004 Office Action:**

The structure of the device of Jackson does not teach or suggest nor permit the features of the present invention. The present active claims now clearly distinguish the physical, structural differences. The Applicant is glad to have learned of the 7 references, not relied upon, revealed within the March 02, 2004 Office Action. The present claims 17 and 18, contain numerous patentable physical distinctions over these recently-revealed references, as was partly addressed earlier.

The (cancelled) claim 1 , of June 28,2001, was a very general and insufficient recitation of the physical features shown in FIG.1; the present attempt at drafting allowable claims recites the physical features which are novel, and recites the need being solved, and recites the advantages of the structure. The continuing constructive guidance by the Examiners is strongly appreciated.

**Request for Claim Drafting Assistance under MPEP 707.07(j)**

In view of each prior earnest, sincere attempt at drafting allowable claims, and in view of all prior Remarks by Applicant, the Applicant pro se

solicits a reconsideration of merit, and resubmits that patentable subject matter is clearly present, in spite of the inexperience shown by numerous claims-drafting attempts prior to now.

If the examiner agrees that the claims continue to be technically inadequate, the Applicant respectfully, and sincerely, requests that the examiner write an acceptable claim pursuant to MPEP 707.07(j) on behalf of the Applicant, or provide further constructive guidance. ("...This practice will expedite prosecution and offer a service to individual inventors not represented by a registered patent attorney or agent. Although this practice may be desirable and is permissible in any case deemed appropriate by the examiner, it will be expected to be applied in all cases where it is apparent that the applicant is unfamiliar with the proper preparation and prosecution of patent applications.")

**Conclusion:**

The Applicant pro se has herein entered amendments to the Claims and Specification of this Application, in order to comply with the requirements in the 3/2/2004 Office Action and to comply with constructive guidance received from USPTO Examiners, by phone, between April 27 and May 18, 2004. The Applicant has herein explained how prior Rejections are now overcome. The Application recites a novel structure of elements that is physically different from prior art, which same non-obvious structure produces beneficial results, which solves the long-felt need for a simple and inexpensive mirror system to improve driver safety when backing-up their passenger vehicle into lane(s) of cross-traffic, by providing an alternative view to the driver; the physical distinctions of the present novel structure are of patentable merit under Section 102 and 103.

The Applicant submits that this Application is now in full condition for allowance, which action is respectfully solicited.

(next page)

Very Respectfully,

William L. Morrison

William L. Morrison, Applicant Pro Se

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On May 25, 2004

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